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PATENT

Attorney Docket No.: 082368-000200US

Client Reference No.: KAN-X0301-US

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

On November 30, 2004

TOWNSEND and TOWNSEND and CREW LLP

By:

Anna Kundel
Anna Kundel

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

OCHIYA and TERATANI

Application No.: 10/789,159

Filed: February 27, 2004

For: METHODS FOR INDUCING
DIFFERENTIATION OF
PLURIPOTENT CELLS

Examiner: Not yet assigned

Art Unit: 1645

INFORMATION DISCLOSURE
STATEMENT UNDER 37 CFR §1.97 and
§1.98

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:


The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of the references are enclosed. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement.

However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Kevin Bastian
Reg. No. 34,774

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KLB:ack
60365608 v1



PTO/SB/21 (09-04)

**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/789,159
Filing Date	February 27, 2004
First Named Inventor	Ochiya, Takahiro
Art Unit	1645
Examiner Name	Not yet assigned
Attorney Docket Number	082368-000200US

ENCLOSURES (Check all that apply)

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Sheet	1	of	3
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Application Number	10/789,159
Filing Date	February 27, 2004
First Named Inventor	Ochiya, Takahiro
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Examiner Name	Not yet assigned
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60365608 v1

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				Application Number	10/789,159
				Filing Date	February 27, 2004
				First Named Inventor	Ochiya, Takahiro
				Art Unit	1645
				Examiner Name	Not yet assigned
Sheet	2	of	3	Attorney Docket Number	082368-000200US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	AE	AZUMA, H., et al, "Enrichment of Hepatic Progenitor Cells from Adult Mouse Liver," <i>Hepatology</i> , 2003, pp. 1385-94, Vol. 37(6).	
	AF	CHINZEI, R., et al., "Embryoid-Body Cells Derived from a Mouse Embryonic Stem Cell Line Show Differentiation Into Functional Hepatocytes," <i>Hepatology</i> , 2002, pp. 22-29, Vol. 36(1).	
	AG	CHOI, D., et al., "In Vivo Differentiation of Mouse Embryonic Stem Cells Into Hepatocytes," <i>Cell Transplantation</i> , 2002, pp. 359-68, Vol. 11(4).	
	AH	FAIR, JH, et al., "Induction of Hepatic Differentiation in Embryonic Stem Cells By Co-Culture With Embryonic Cardiac Mesoderm," <i>Surgery</i> , 2003, pp. 189-96, Vol. 134(2).	
	AI	HAMAZAKI, T., et al., "Hepatic Maturation in Differentiating Embryonic Stem Cells In Vitro," <i>FEBS Letters</i> , 2001, pp. 15-19, Vol. 497(1)	
	AJ	HE, ZP, et al., "Differentiation of Putative Hepatic Stem Cells Derived from Adult Rats into Mature Hepatocytes in the Presence of Epidermal Growth Factor and Hepatocyte Growth Factor," <i>Differentiation</i> , 2003, pp. 281-90, Vol. 71(4-5)	
	AK	HU, A., et al., "Hepatic Differentiation from Embryonic Stem Cells In Vitro," <i>Chinese Medical Journal</i> , 2003, pp. 1893-97, Vol. 116(12)	
	AL	ISHIZAKA, S., et al., "Development of Hepatocytes from ES Cells After Transfection with the HNF-3 β Gene," <i>FASEB Journal</i> , 2002, pp. 1444-46, Vol. 16(11).	
	AM	ITSKOVITZ-ELDOR, J., et al, "Differentiation of Human Embryonic Stem Cells Into Embryoid Bodies Comprising the Three Embryonic Germ Layers," <i>Molecular Medicine</i> , 2000, pp. 88-95, Vol. 6(2)	
	AN	JOCHHEIM, A., et al, "Quantitative Gene Expression Profiling Reveals a Fetal Hepatic Phenotype of Murine ES-Derived Hepatocytes," <i>Int. J. Dev. Biol.</i> , 2004, pp. 23-29, Vol. 48(1).	
	AO	JONES, E.A., et al., "Hepatic Differentiation of Murine Embryonic Stem Cells," <i>Experimental Cell Research</i> , 2002, pp. 15-22, Vol. 272(1).	
	AP	KANDA, S., et al, "In Vitro Differentiation of Hepatocyte-Like Cells from Embryonic Stem Cells Promoted By Gene Transfer of Hepatocyte Nuclear Factor 3 β ," <i>Hepatology Research</i> , 2002, pp. 225-231, Vol. 26(3)	
	AQ	KUAI, XL, et al., "Generation of Hepatocytes From Cultured Mouse Embryonic Stem Cells," <i>Liver Transplantation</i> , 2003, pp. 1094-99, Vol. 9(10)	
	AR	MITAKA, T. et al., "Effects of Mitogens and Co-Mitogens on the Formation of Small-Cell Colonies in Primary Cultures of Rat Hepatocytes," <i>Journal of Cellular Physiology</i> , 1993, pp. 461-68, Vol. 157(3)	
	AS	MIYASHITA, H., et al., "Evidence for Hepatocyte Differentiation from Embryonic Stem Cells in Vitro," <i>Cell Transplantation</i> , 2002, pp. 429-34, Vol. 11(5)	
	AT	OCHIYA, T., et al., "Hepatic Cell Differentiation from ES Cells and Progress Toward Liver Regenerative Medicine," <i>The 2nd Meeting of the Japanese Society for Regenerative Medicine</i> , 2003, pp. 89(1433), Vol. 2(Suppl)	x
	AU	OCHIYA, T., "Differentiation of Embryonic Stem Cells Into Hepatocytes: Biological Functions and Therapeutic Application," 2004, <i>Keystone Symposia</i> , 2004, pp. 104(337), Vol. Stem Cells	
	AV	OH, SH, et al., "Hepatocyte Growth Factor Induces Differentiation of Adult Rat Bone Marrow Cells Into a Hepatocyte Lineage In Vitro," 2000, <i>Biochemical and Biophysical Research Communications</i> , 2000, pp. 500-04, Vol. 279(2)	

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¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

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	AW	OKUMOTO, K., et al., "Differentiation of Bone Marrow Cells Into Cells That Express Liver-Specific Genes In Vitro: Implication of the Notch Signals in Differentiation," <i>Biochemical and Biophysical Research Communications</i> , 2003, pp. 691-95, Vol. 304(4)		
	AX	RAMBHATLA, L., et al., "Generation of Hepatocyte-Like Cells from Human Embryonic Stem Cells," <i>Cell Transplantation</i> , 2003, pp. 1-11, Vol. 12(1)		
	AY	RUHNKE, M., et al., "Long-Term Culture and Differentiation of Rat Embryonic Stem Cell-Like Cells Into Neuronal, Glial, Endothelial, and Hepatic Lineages," <i>Stem Cells</i> , 2003, pp. 428-36, Vol. 21(4)		
	AZ	SACHINIDIS, A., et al., "Identification of Platelet-Derived Growth Factor-BB as Cardiogenesis-Inducing Factor in Mouse Embryonic Stem Cells Under Serum-Free Conditions," <i>Cellular Physiology and Biochemistry</i> , 2003, pp. 423-29, Vol. 13(6)		
	BA	SCHULDINER, M., et al., "Effects of Eight Growth Factors on the Differentiation of Cells Derived From Human Embryonic Stem Cells," <i>Proceedings of the Nat'l Academy of Sciences USA</i> , 2000, pp. 11307-12, Vol. 97(21)		
	BB	SCHWARTZ, R.E., et al., "Multipotent Adult Progenitor Cells From Bone Marrow Differentiate Into Functional Hepatocyte-Like Cells," <i>The Journal of Clinical Investigation</i> , 2002, pp. 1291-302, Vol. 109(10)		
	BC	SUZUKI, A., et al., "Development and Disease: Role for Growth Factors and Extracellular Matrix in Controlling Differentiation of Prospectively Isolated Hepatic Stem Cells," <i>Development</i> 2003, pp. 2513-24, Vol. 130(11)		
	BD	TANAKA, Y. et al., "Expressions of Hepatobiliary Organic Anion Transporters and Bilirubin-Conjugating Enzyme in Differentiating Embryonic Stem Cells," <i>Biochemical and Biophysical Research Communications</i> , 2003, pp. 324-30, Vol. 309(2)		
	BE	TERATANI, T. et al., "Induction of Hepatic Cell Differentiation from <i>Macaca Fascicularis</i> ES Cells," <i>The 2nd Meeting of the Japanese Society for Regenerative Medicine</i> , 2003, pp. 92(1451), Vol. 2(Suppl)	x	
	BF	TERATANI, T., et al., "Differentiation of Embryonic Stem Cells into Hepatocytes: Biological Functions and Therapeutic Application," <i>Dai 4 Kai Monbukagakusyou Tokutei Ryoiki Kenkyu Gan 6 Ryoiki Wakate Kenkyusya Workshop</i> , 2003, p. 198(065)		
	BG	TERATANI, T., et al., "Differentiation of Functional Hepatocytes from ES Cells in Monoculture and Therapeutic Application for Liver Cirrhosis," <i>The 62nd Annual Meeting of the Japanese Cancer Association</i> , 2003, p. 3212-OP	x	
	BH	TERATANI, T., et al., "Derivation of Hepatocytes from Stem Cells in Adherent Monoculture System," <i>The 26th Annual Meeting of the Molecular Biology Society of Japan</i> , 2003, p. O4K-10	x	
	BI	YAMADA, T. et al., "In Vitro Differentiation of Embryonic Stem Cells into Hepatocyte-Like Cells Identified by Cellular Uptake of Indocyanine Green," <i>Stem Cells</i> , 2002, pp. 146-54, Vol. 20(2)		
	BJ	YAMAMOTO, H. et al., "Differentiation of Embryonic Stem Cells Into Hepatocytes: Biological Functions and Therapeutic Application," <i>Hepatology</i> , 2003, pp. 983-93, Vol. 37(5)		
	BK	YAMAMOTO Y. et al., "Expression Profiles of Transcription Factors in Hepatic Commitment of ES Cells," <i>The 26th Annual Meeting of the Molecular Biology Society of Japan</i> , 2003, p. O1O-2	x	
	BL	YIN, Y. et al., "AFP", ESC-Derived Cells Engraft and Differentiate into Hepatocytes in Vivo," <i>Stem Cells</i> , 2002, pp. 338-46, Vol. 20(4)		
	BM	YOSHIDA, N., et al., "Induction of Donor-Specific Tolerance to Allogeneic Hepatocytes by Allogeneic Bone Marrow Transplantation," <i>Hepatology Research</i> , 2003, pp. 148-53, Vol. 26(2)		

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